DOCUMENT RESUME

ED 346 932 JC 920 366

AUTHOR Evans, John W.
TITLE Making Research Useful for CEO's and Trustees: Examples from Research on Faculty Salaries, Enrollment Projections, and Minority Access.
PUB DATE 18 Apr 91
NOTE 24p.; Paper presented at the Annual Research Conference of the Community College League of California (29th, Asilomar, CA, April 17-19, 1991).
PUB TYPE Reports - Descriptive (141) -- Statistical Data (110) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Access to Education; Admission Criteria; Community Colleges; Comparative Analysis; *Enrollment Projections; Ethnicity; Governing Boards; Graphs; *Institutional Research; *Minority Groups; *Teacher Salaries; *Theory Practice Relationship; Two Year Colleges; Urban Demography
IDENTIFIERS Population Projections; San Joaquin Delta College CA

ABSTRACT

Drawing on four examples of institutional research undertaken at San Joaquin Delta College (SJDC), this paper offers six principles to help researchers make their work more relevant and to enable decision makers to utilize research more effectively. The research examples provide brief descriptions of the need for, methodology of, and findings of studies on SJDC's impacted nursing program; on faculty salaries; on enrollment projections; and on the role of ethnicity in academic choice and outcome. Among the findings reported are the following: (1) the office of institutional research developed a multi-factor selection procedure for SJDC's impacted nursing program, which placed the heaviest weight on grades and test scores, but added points for minority status; (2) when SJDC was compared to a group of comparable districts, the college ranked first in faculty salaries; (3) between 1988 and 2005, San Joaquin County's population will grow dramatically, and the ethnic composition of the county population will be transformed to a majority minority ethnic distribution; and (4) the actual obtaining of degrees and certificates was found to be tied to ethnicity. The principles offered include that research must be relevant to major policy and management issues; time is of the essence; clarity of presentation is the sine qua non of success; a commitment to the value of research is bedrock; research must be adequately supported; and research must have status and access within the college's organization. (JMC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED346932

Making Research Useful for CEO's and Trustees:

Examples from Research on Faculty Salaries, Enrollment Projections, and Minority Access

John W. Evans, Ph.D.
Director of Institutional Research and Planning
San Joaquin Delta College
Stockton, California

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. W. Evans

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

JC 920 366

Community College League of California
29th Annual Research Conference
Asilomar, California
April 17-19, 1991

BEST COPY AVAILABLE

MAKING RESEARCH USEFUL FOR CEO'S AND TRUSTEES:

EXAMPLES FROM RESEARCH ON FACULTY SALARIES, ENROLLMENT PROJECTIONS, AND MINORITY ACCESS[1]

John W. Evans, Ph.D.
Director of Institutional Research and Planning
San Joaquin Delta College

The theme of this conference--"Good Research-Good Decisions"--addresses an important issue: the two-sided problem of, on the one hand, getting *researchers* to make research more useful to decision makers, while on the other, getting *CEO's and trustees* to call for and make better use of research in the policy process.

We are all familiar with the complaints from both sides. Researchers say their work is not supported, not understood, and not used. Top level decision makers complain that the research they receive is too academic to be relevant, too technical to be understood, and too late to affect the decision it was carried out to enlighten. Thus, the two ships continue to pass in the night, and countless opportunities to improve policy decisions and resource allocations are lost.

This paper describes several examples of institutional research carried out at San Joaquin Delta College and, on the basis of these, suggests several principles that may help researchers make their work more useful and enable decision makers to gain more from it.

I THE RESEARCH EXAMPLES

A Impacted Programs and Promoting Access

Perhaps the most important defining characteristic of California's Community Colleges is the commitment to open admission. Still, even colleges with totally open admission policies must sometimes confront, for some of their high demand programs, the problem of having more qualified applicants than they can accommodate.

---

[1]Paper presented at the CCLC Annual Research Conference, Asilomar, CA, April 18, 1991.

Like many other community colleges, Delta faces this problem with its nursing program, which recently has had three to four times more qualified applicants than it has course openings or clinical training slots.

When the Health Sciences Division wrestled with this problem in 1989, they were keenly sensitive to the adverse impact on minorities that the straightforward use of grades and test scores would have. After much deliberation, they decided to select among the qualified applicants by means of a lottery.

When this new system was announced it created a storm of protest among the students. A large group complained to the Board of Trustees that this system would subordinate merit to chance. They argued that those with top grades and test scores might have to reapply numerous times before their number came up, while less qualified but luckier students would be admitted ahead of them.

The Board delayed action on any new system, and the President asked me, as Director of Institutional Research and Planning, to analyze the problem and develop some alternatives.

Working with the nursing faculty, we developed a new multi-factor selection procedure which placed the heaviest weight on grades and test scores, but added points for minority status.

When we tested the new system on the current group of applicants, those who would be admitted had a substantially higher GPA and mean test score than those not selected (indicating a much higher probability of succeeding in the program), *and* the percent of minorities was higher than it would have been had selection been based only on grades and test scores.

The new system did not maximize all the desiderata. A few qualified non-minorities who would have been admitted under a system which used only grades and test scores were displaced in the ranking by minorities who could add 10 points to their composite score. Moreover, even with the incorporation of points for minority status, the percent of minorities in the selected group was still lower than in the non-selected group.

Nevertheless, compared to a lottery system or one which used only grades and test scores, the new system was an improvement (see Chart A). It applied the greatest weight to measures of ability and performance, but it made a significant effort towards increasing access of disadvantaged minorities to the nursing program.[2]

---

[2]Evans, John W., *Revising the Criteria for Admission to SJDC's Nursing Program.* Stockton: San Joaquin Delta College, June 2, 1989

Chart A

Characteristics of Alternative Nursing Admission Criteria

	I GRADES AND TEST SCORES ONLY	II LOTTERY	III GRADES, TEST SCORES, AND POINTS FOR MINORITY STATUS
EMPHASIS ON MERIT	HI	LO	HI
ADVERSE IMPACT ON MINORITIES	HI	LO	LO

The new system did not make everyone happy, but most felt it was far preferable to a lottery. It was unanimously approved by the Board and implemented.

From the standpoint of initiating and utilizing research, this example has several important features:

First, when a technical problem with large policy implications arose, the President turned to research for assistance in analyzing the problem and developing alternatives.

Second, research was able to work with the faculty, and produce a technically complex but understandable solution that was directly relevant to the problem.

Third, the analytic work was carried out quickly, and was therefore not bypassed in the urgency to reach a decision.

Fourth, the new admission system was moved directly into the decision making process, and was enacted by the Board into policy.

B. Faculty Salaries

The second example is a major study that resulted from a direct assignment from the President. He wanted a comparative study of faculty salaries for two reasons. First, he constantly reiterates to the staff that he "wants Delta

College to be the best community college in the nation," and as part of achieving this goal he wanted to be sure the College was in a strong position to attract top faculty talent in an increasingly competitive market.

Second, he wanted a solid and comprehensive data base to be available during salary negotiations with the faculty union, when the pressures of the situation often generate questionable comparisons and claims.

This study[3] went beyond the annual reports on California Community College faculty salaries published by Kern Community College District and the CCCT in three ways:

1. It compared Delta's faculty salaries with two specially selected groups of comparable districts, as opposed to making comparisons only with the state average which is comprised of a wide range of large and small, rural and urban, and single vs. multi-college districts.

2. It also compared Delta's salaries with those of both the public and private four-year postsecondary institutions in the State.

3. It developed a means of adjusting salaries for the varying cost of living in the districts being compared. This was a particularly important enhancement to the standard salary comparisons because of the wide variation in the cost of living throughout California. The purchasing power of a $50,000 salary is quite different in Stockton, Shasta, and Fresno from what it is in San Francisco, Los Angeles, or Monterey.

The basic finding of the study was that Delta's faculty is among the most highly paid academic professionals in the State.

As shown in Table 1, Delta ranked third or fourth among the 70 CCCDs in the minimum and maximum salaries for non-doctorate and doctorate levels (unadjusted for differences in cost of living).

When Delta is compared to a group of comparable districts, it ranks first; and the margin is widened when the salaries are adjusted for cost of living (Table 2):

-Delta's maximum gross salary without a doctorate is between 5% and 28% greater than other comparable districts, with the average being 13%.

-When these salaries are adjusted for the cost of living differences that exist in these districts, Delta's advantage ranges from 5% to 36%, with the average being 18%.

Moreover, Delta's average faculty salary has a substantial advantage over the

---

[3]Evans, John W., *Faculty Salaries at Delta College.* Stockton: San Joaquin Delta College, November 13, 1989.

TABLE 1
Minimum and Maximum Salaries, By Academic Degree, for All 70 California Community College Districts, 88-89

RANK	DISTRICT	MIN SALARY WITH M.A.	DISTRICT	MAX SALARY W/O DOCTORATE	DISTRICT	MAX SALARY W/DOCTORATE
1	West Kern	30,878	Saddleback	60,250	Saddleback	61,250
2	Lake Tahoe	30,318	Palomar	51,275	Palomar	52,225
3	Sequoias	29,500	Marin	50,636	**SAN JOAQUIN DELTA**	**51,889**
4	**SAN JOAQUIN DELTA**	**29,268**	**SAN JOAQUIN DELTA**	**50,259**	Marin	51,484
5	Foothill	28,403	Foothill	49,573	Santa Monica	50,966
6	El Camino	28,038	Cerritos	49,508	Cerritos	50,942
7	West Valley	28,037	Santa Monica	49,360	Sequoias	50,862
8	Southwestern	27,168	Sequoias	49,062	El Camino	50,427
9	Yosemite	27,108	El Camino	48,624	Foothill	49,573
10	Santa Monica	27,021	Southwestern	47,706	Long Beach	49,382
11	Marin	26,883	Mt San Antonio	47,650	Southwestern	49,206
12	Rio Hondo	26,792	Glendale	47,623	South County	49,116
13	Contra Costa	26,760	Grossmont	47,486	Rio Hondo	48,962
14	Sonoma	26,750	Rancho Santiago	47,476	Rancho Santiago	48,845
15	Cerritos	26,572	Rio Hondo	47,468	Glendale	48,703
16	Long Beach	26,247	Sonoma	47,450	Grossmont	48,377
17	Rancho Santiago	26,228	South County	47,220	Contra Costa	48,372
18	Fremont	26,104	Long Beach	47,167	Sonoma	48,350
19	Mt San Antonio	26,065	Contra Costa	47,004	San Mateo*	48,039
20	Saddleback	25,908	Santa Clarita	46,870	Ventura	47,997
21	Glendale	25,811	San Jose	46,657	North Orange	47,996
22	Ventura	25,755	North Orange	46,210	Santa Clarita	47,660
23	West Hills	25,489	Citrus	46,109	Mt San Antonio	47,650
24	San Francisco	25,481	West Valley	45,714	Citrus	47,626
25	South County	25,476	Ventura	45,656	San Jose	47,440
26	Butte	25,475	West Kern	45,499	Fremont	46,678
27	Palomar	25,466	Fremont	45,470	West Valley	46,626
28	San Jose	25,428	San Mateo*	45,269	Riverside*	46,594
29	Gavilan	25,409	Riverside*	45,097	West Kern	46,499
30	Yuba	25,328	Yuba	44,995	Yuba	46,495
31	Citrus	25,213	Lake Tahoe	44,970	Hartnell	46,298
32	State Center	25,194	San Luis Obispo	44,924	San Luis Obispo	46,281
33	Victor Valley	25,104	Hartnell	44,878	Butte	46,229
34	Santa Clarita	24,970	Gavilan	44,861	Gavilan	45,911
35	Sierra	24,934	Sierra	44,859	Merced	45,901
36	Hartnell	24,930	Butte	44,685	Mt San Jacinto	45,884
37	Mira Costa	24,897	Mt San Jacinto	44,413	Santa Barbara	45,480
38	Redwoods	24,875	Santa Barbara	44,280	Coast	45,325
39	Riverside*	24,856	Redwoods	44,181	Palo Verde	45,318
40	Merced	24,854	State Center	44,019	Mira Costa	45,248
41	Santa Barbara	24,815	Mira Costa	43,998	Kern	45,239
42	Coast	24,772	Los Angeles	43,890	Lake Tahoe	44,970
43	San Bernadino*	24,648	Coast	43,763	State Center	44,902
44	Los Angeles	24,610	Palo Verde	43,743	Sierra	44,859
45	Antelope Valley	24,573	Victor Valley	43,687	Los Angeles	44,820
46	San Luis Obispo	24,488	Antelope Valley	43,595	Pasadena	44,810
47	San Mateo*	24,447	Merced	43,489	Yosemite	44,726
48	North Orange	24,290	San Diego	43,240	Redwoods	44,681
49	Los Rios	24,253	Yosemite	43,214	Antelope Valley	44,599
50	Imperial	24,250	Kern	42,609	San Diego	44,590
51	Kern	24,223	Desert	42,450	Los Rios	44,456
52	Mt San Jacinto	24,139	West Hills	42,449	West Hills	44,249
53	Solano*	24,120	San Bernadino*	42,373	Desert	44,221
54	Desert	24,056	Los Rios	42,335	San Bernadino*	43,752
55	Grossmont	24,053	Imperial	42,105	Victor Valle	43,687
56	Shasta	23,877	Pasadena	41,945	Imperial	43,405
57	Cabrillo	23,779	San Francisco	41,945	Siskiyou	43,144
58	Monterey Peninsula	23,738	Siskiyou	41,944	Solano*	43,060
59	Chaffey	23,693	Solano*	41,760	Shasta	42,409
60	San Diego	23,660	Allan Hancock	41340	Allan Hancock	42,344
61	Pasadena	23,326	Shasta	41,111	Cabrillo	42,179
62	Siskiyou	23,273	Lassen	40,684	San Francisco	41,945
63	Allan Hancock	23,163	Cabrillo	40,535	Mendocino	41,318
64	Mendocino	22,742	Napa*	40,307	Lassen	41,184
65	Lassen	22,654	Mendocino	40,157	Monterey Pen	41,102
66	Napa*	21,971	Monterey Peninsula	39,677	Chaffey	40,858
67	Palo Verde	21,825	Chaffey	39,378	Napa*	40,307
68	Barstow*	21,432	Peralta	39,140	Barstow*	39,232
69	Compton*	20,285	Barstow*	38,432	Peralta	39,140
70	Peralta	19,562	Compton*	35,744	Compton*	36,744
	STATE AVERAGE	**25,139**	**STATE AVERAGE**	**44,764**	**STATE AVERAGE**	**46,015**

*Salary figures are 87-88.

Table 2

Maximum Salaries Without a Ph.D. For Delta College and the 12 FACTOR COMPARISON GROUP, Adjusted for Cost of Living

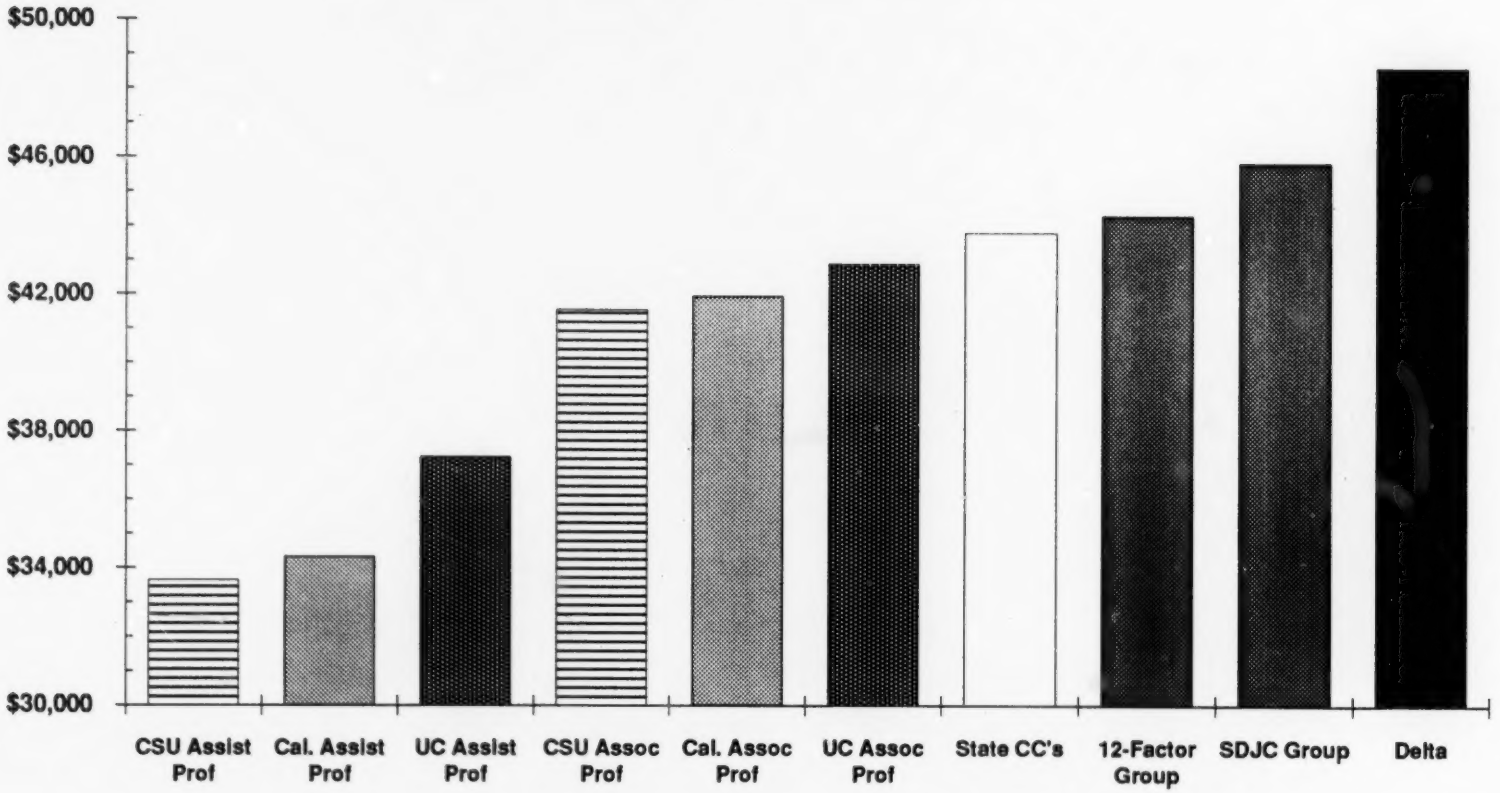
	Max. Gross Salary w/o Ph.D.	% SJDC Greater	Salary Adjusted for Avg. Cost of Living*	% SJDC Greater	Effect of C.O.L. Adj.
San Joaquin Delta	**$50,259**	**0%**	**$52,061**	**0%**	**4%**
Southwestern	47,706	5%	49,397	5%	4%
Cerritos	49,508	2%	48,461	7%	-2%
Rio Hondo	47,468	6%	47,973	9%	1%
El Camino	48,624	3%	47,219	10%	-3%
State Center	44,019	14%	46,581	12%	6%
South County	47,220	6%	45,039	16%	-5%
Shasta	41,111	22%	44,820	16%	9%
San Jose	46,657	8%	43,215	20%	-7%
Los Rios	42,335	19%	43,165	21%	2%
San Mateo	45,269	11%	41,875	24%	-7%
Solano	41,760	20%	41,520	25%	-1%
Cabrillo	40,535	24%	41,455	26%	2%
Peralta	39,140	28%	41,106	27%	5%
Chaffey	39,378	28%	38,174	36%	-3%
Avg. of Comparison Gp.	**$44,338**	**13%**	**$44,286**	**18%**	

* The adjusted salaries are obtained by first adding or subtracting the average cost of living for the whole state ($22,637) from the cost of living in each district. Then, this figure is added to or subtracted from the gross salary in that district.

That is:
Sa = Sg+(Cm - Cd)
where:
Sa = Adjusted Salary
Sg = Gross Salary
Cm = Average cost of living in the state
Cd = District cost of living

Chart B

Average Faculty Salaries, 1988-89



average salary of both assistant and associate professors in the State's public and private four-year schools (Chart B).

The results of this study were useful in two ways. First, they provided a solid indication that, at least on the salary dimension, Delta can compete with both the other community colleges and the four-year institutions in the State.

Second, the study provided a well-researched body of data that made indisputable comparisons possible, and thereby helped reduce the arguments over the facts that so often characterize contract negotiations.

C. Enrollment Projections

The third example is a major population and enrollment projection study which was carried out to serve a broad range of planning purposes.

All postsecondary institutions need enrollment projections to plan for future enrollment levels, and the expanding or contracting services, facilities, and budgets they will require.

In recent years, developing projections has become increasingly difficult because their principal basis, the 1980 Census, has become more and more out of date with the passage of time.

The Department of Finance produces its own annual revisions of both population and community college enrollment projections, but the widespread feeling among analysts in the Chancellor's Office and elsewhere is that these projections have underestimated the real numbers.

Moreover, the DOF makes projections only for districts as a whole. Accurate planning for facility expansion requires population and enrollment projections for the sub-parts of districts where the size and composition of the population may be changing at quite different rates.

To provide up-to-date and locally specific population and enrollment projections, several bodies of data were acquired and analyzed. These included not only the DOF population and enrollment projections, but a different set of population projections from the Center for Continuing Study of the California Economy, and some limited zip code population data from the National Planning Data Corporation.

The study produced results that were dramatic in their implications for the College's future, and directly useful in planning for it:[4]

---

[4]Evans, John W., *Projecting Enrollments for Delta College: Explosive Population Growth Will Enlarge and Diversify Delta's Student Body.* Stockton: San Joaquin Delta College, July 18, 1990.

- Between 1988 and 2005, San Joaquin County's population will grow from from 456,000 to between 666,728 and 779,300 depending on which alternative projection is used. The Department of Finance predicts the County's population will grow by 46%, while the Center for Continuing Study of the California Economy projects an astonishing 71% increase (Chart C).

- In addition to this extraordinary growth, the ethnic composition of the County population will be transformed. In 1988, whites outnumbered all ethnic minorities combined by a ratio of two to one. But by 2005, ethnic minorities will predominate (Chart D).

- The Delta College student body will mirror these local population changes. Fall enrollments will rise from 16,700 in 1988 to between 27,270 and 32,781 in 2005, again depending on which alternative projection is used (Chart E).

- White students, which outnumbered all minority students combined in 1988 by nearly two to one, will themselves be a statistical minority shortly after the turn of the century (Chart F and G).

- Currently, participation rates (the percent of the County population that attends Delta College) vary greatly among sub-groups of the population. Specifically:

  -Overall, one in every 20 people (5.54%) in the San Joaquin County college-age population (18-65+) was registered at Delta College in the Fall of 1989.

  -Whites and blacks are enrolling at Delta College at essentially the same rate (about 5%), which is slightly *below* average. Hispanics are well below average (at 4.40%), but Asians are enrolling at *twice* the average rate for the total college-age population (10.56%).

  -These differences are sharpened in the 19-and-under age group Chart H). In this group, whites enroll at about the average rate (35.79%), blacks and Hispanics are well below average (at about 23%), while the enrollment rate for Asians is *two to three times* that of the other ethnic groups (71.33%).

  -Black males and Hispanic males have the lowest enrollment rates in the educationally crucial 19-and-under age group--about one in five--while an astonishing *four out of every five* (82.43%) Asian males in this age group was registered at Delta College in the Fall of 1989.

- The spectacular growth the College faces will occur unevenly throughout the district, with some of the most rapid increase taking place in an area that requires a substantial commute to the campus.

CHART C

Comparative Population Projections for San Joaquin County, Department of Finance (DOF) vs. Center for Continuing Study of the California Economy, 1988 to 2005

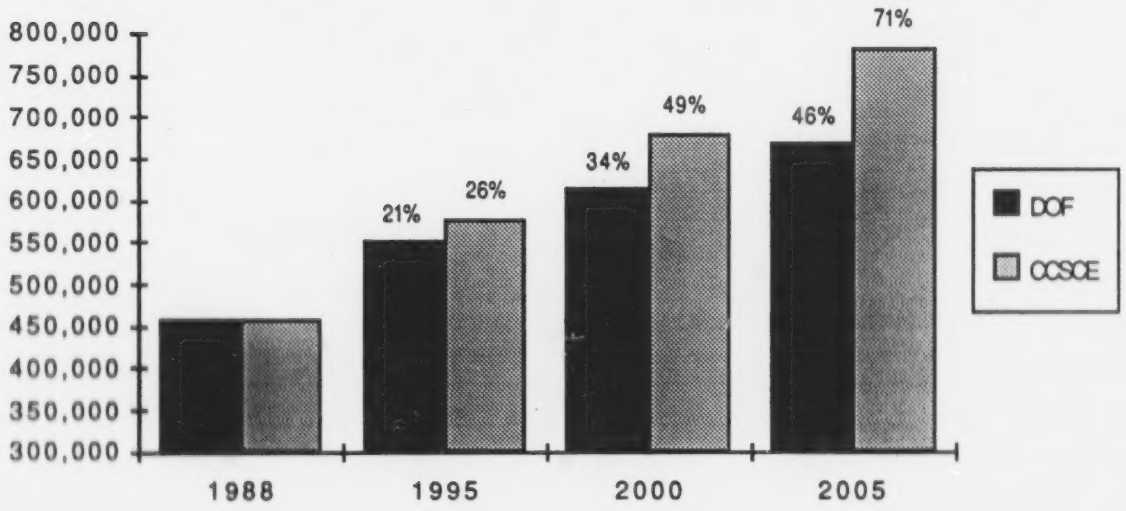
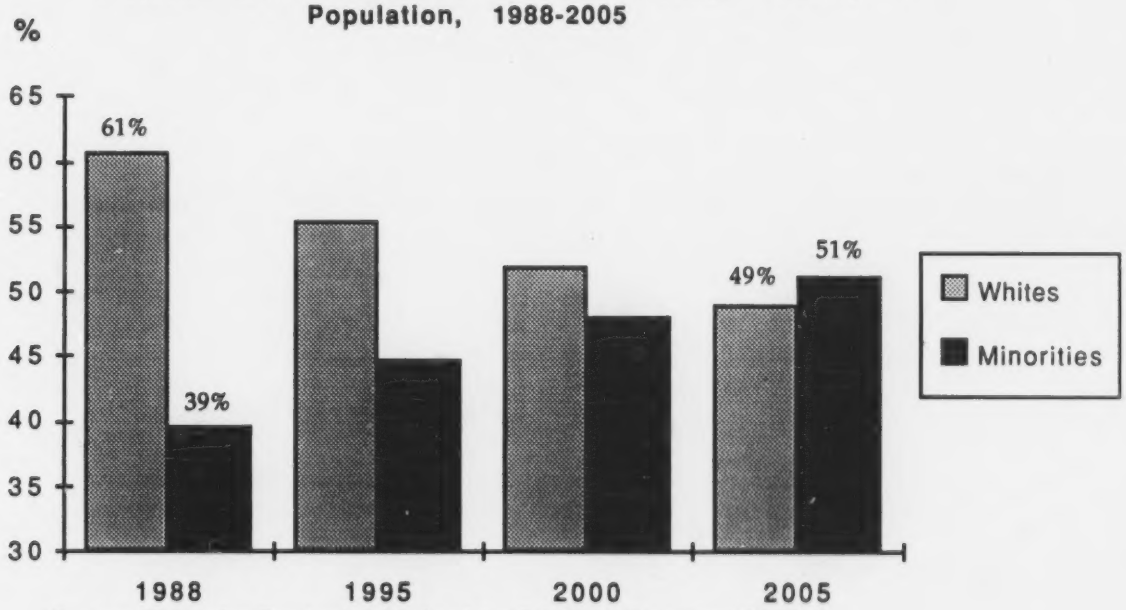


CHART D

Projected Ethnic Composition of the San Joaquin County Population, 1988-2005



Source: Center for Continuing Study of the California Economy (CCSCE)

CHART E

ALTERNATIVE FALL ENROLLMENT PROJECTIONS FOR DELTA COLLEGE, 1990-2005

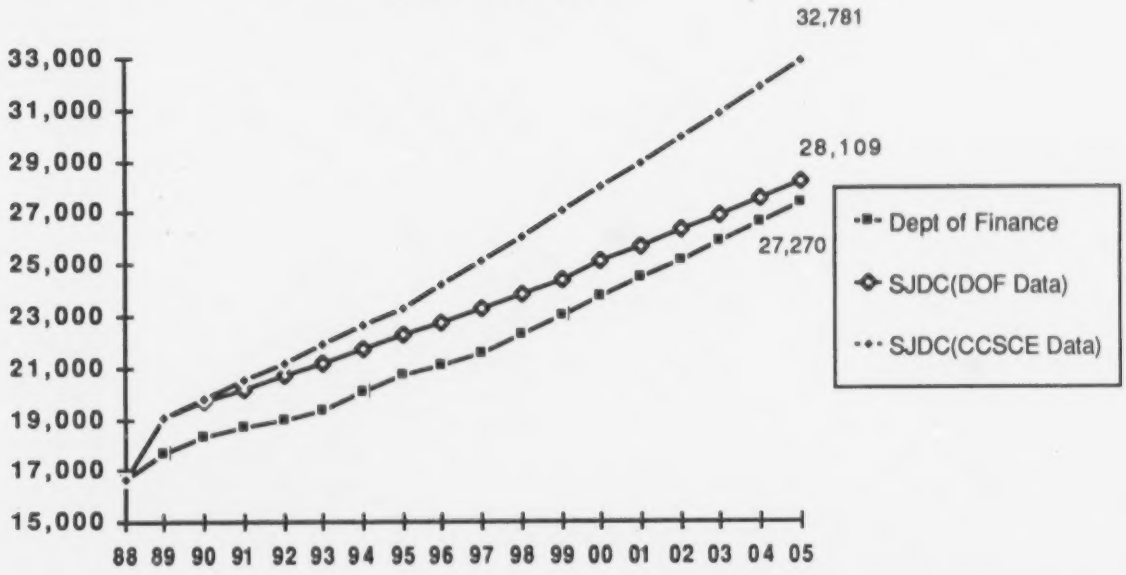


CHART F

Percent Increase of Delta College Ethnic Group Students From Their 1988 Levels

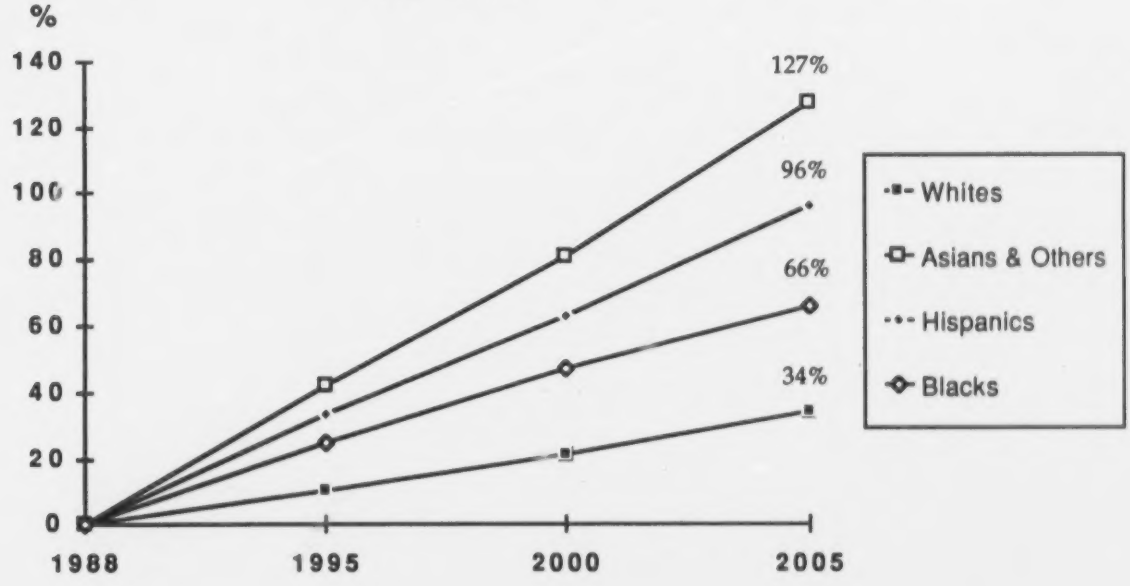


CHART G

Projected Number of White and Minority Students at Delta College, 1988-2005

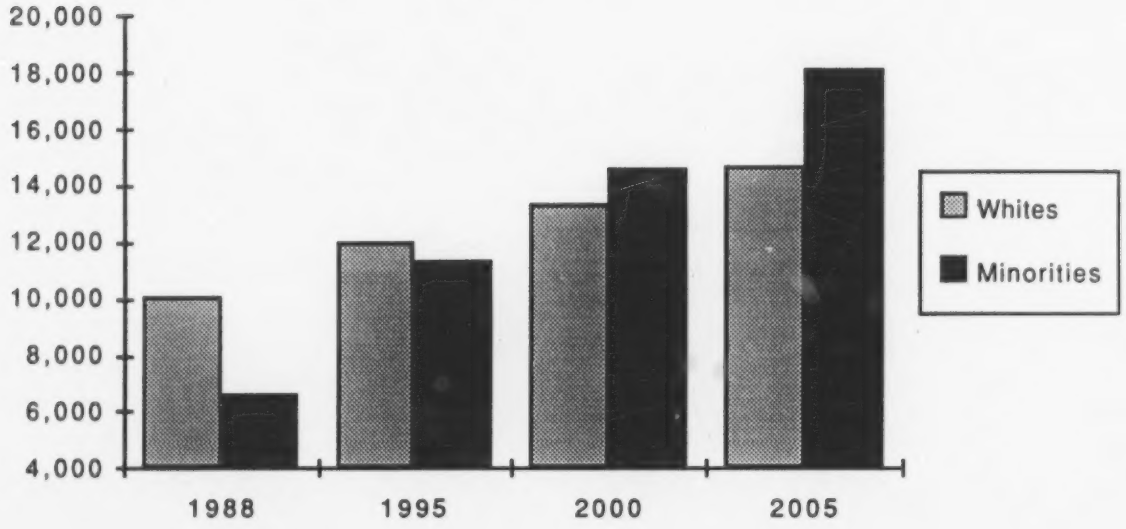
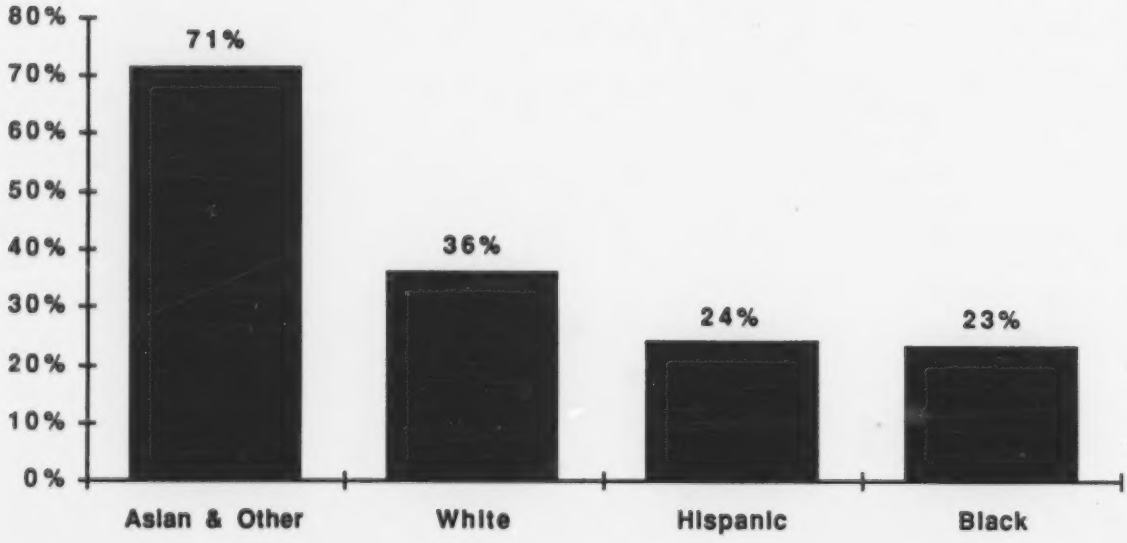


CHART H

PARTICIPATION RATES OF SAN JOAQUIN COUNTY 18 AND 19 YEAR OLDS AT DELTA, BY ETHNIC GROUP, 1989



This study has proved useful to the President and the Board in several ways. First, the President has formed an intersegmental task force to encourage coordinated planning for the major changes that the extraordinary growth will bring to the postsecondary institutions of the San Joaquin County area.

Second, the especially high rate of growth indicated for the southern part of the County has prompted the Administration and the Board to plan for a new attendance center in that area. The data from the projections research were supplied to the Chancellor's Office and its planning contractor, and a new center has been included in the Chancellor's Office Long Range Capital Outlay Plan.

Third, by going beyond the general exclamations of alarm in the press about California's rapidly expanding population, and supplying data on the changes that will occur in the local area, the study has provided the College's faculty and staff with a more concrete understanding of the fundamentally changed environment the College is facing.

The change will not simply be one of increased numbers. Burgeoning growth will bring with it a transformation of the ethnic composition of the student population, with white students falling into the minority shortly after the turn of the century.

If Delta College is to accommodate to this explosion of growth and realize the opportunities it presents for advancing educational equity among underrepresented groups, it will have to plan and implement major expansions in its physical plant, faculty, staff, courses, and services. To do this, it must, of course, be able to count on a proportionate increase in resources from the State.

Beyond these expansions of scale, the College will have to face the major educational challenges that will result from the increased proportion of educationally and linguistically disadvantaged students.

In sum, this study added needed specificity to the generalized scenario of growth the College will be facing in the coming decade, and provided the basis for planning in areas ranging from physical plant to students and curriculum.

D. The Role of Ethnicity in Academic Choice and Outcome

Our fourth example is a study of the role ethnicity plays in determining educational choices and outcomes, and the enormous challenges community colleges face in providing greater access to the burgeoning numbers of minority students they will be serving.[5]

---

[5]Evans, John W., *Ethnicity: Its Role in Academic Choice and Outcome at Delta College.* Stockton: San Joaquin Delta College, April 27, 1990.

The study grew out of both a general need to plan for the ethnic transformation of the District's population and the College's student body that will take place during the next decade, and the specific needs of the College's Affirmative Aciton Committe to develop a concrete plan of action.

The vast differences in life chances between whites and ethnic minorities are sobering. In California:

- A third of blacks and Hispanics live in poverty, compared to only 10% of whites.
- Nearly 80% of white children live with two parents, whereas this is true for less than half of black children.
- Fewer than 10% of white children have as their most educated parent a person with less than a high school education, but this is the case for half of California's Hispanic children.
- White families have a median income that is half again that of black families.
- 17 year old black and Hispanic students read only as well as 13 year old white students.
- The high school drop out rate of blacks and Hispanics is twice that of whites.
- The average SAT score for white students is 952, compared to 895 for Asians, 793 for Hispanics, and 747 for blacks.[5]

The study:

-Detailed the extent to which the major ethnic groups are over- or under-represented in the student body.

-Compared how well students of different ethnicity are prepared to undertake college work.

-Analyzed the relationship between student ethnicity and the major educational choices and outcomes that constitute the educational process, specifically:

>selecting an educational goal;

>choosing a major; and

---

[5]For the detailed data on these and other white-minority comparisons, see *The Condition of Children in California*, PACE, University of California, Berkeley, CA 1989, and the periodic reports of the National Assessment of Educational Progress (NAEP), Educational Testing Service, Princeton, N.J.

>obtaining a degree or certificate.

The study found that:

- On the key issue of representation, the proportions of white students and black students in the student population are almost identical to their respective proportions in the local population, but Asian students are substantially over-represented (by 42%), and Hispanic students are seriously under-represented (by 60%) (Chart I).

- Minority students are substantially less well prepared than white students in the basic reading skills needed for successful college work. On the reading placement test taken by most incoming students, Asian, black, and Hispanic students score significantly below white students, and most of the minority students score below the 15th percentile on the national norms for this test (Chart J).

- Minority students are similarly disadvantaged in basic math skills. Although white students score somewhat higher, the margin of difference is less than in reading, and indicates that they, too, will face difficulty in dealing with college level technical subjects (Chart K).

- There are educationally important differences among the ethnic groups in their choice of majors. Asians tend to concentrate in the scientific and technical areas, and show less interest in the social sciences and human service occupations. The reverse is true for blacks and Hispanics. White students are above average in selecting the Liberal Arts/Transfer major, reflecting a greater orientation to obtaining a baccalaureate degree, but otherwise their choice of majors is closer to the social service pattern of black and Hispanic students than to the technical and scientific pattern of Asian students.

- Regardless of what graduation rate is judged to be appropriate, the data indicate that, as in the other phases of the educational process, the actual obtaining of degrees and certificates is tied to ethnicity. Similar to the pattern observed in most of the other comparisons, Asian students receive degrees and certificates substantially in excess of their proportion of the student population; Hispanics are substantially under-represented; and white students and black students fall in between (Chart L).

- Rapidly increasing population and enrollment growth over the coming decade, along with a large increase in the proportion of minorities, will increase the number of educationally disadvantaged and ESL students. This means that community colleges in general and Delta College in particular will be facing greater educational challenges (Chart M).

- These findings underscore the key importance of the Matriculation effort. Remediation programs will have to be expanded in order for the College to carry out its central mission of advancing equal educational opportunity in the fundamentally changed environment that the 21st century will bring.

CHART I

ETHNIC DISTRIBUTION OF SAN JOAQUIN COUNTY POPULATION (AGES 15-65) AND DELTA COLLEGE STUDENTS, 1988-89

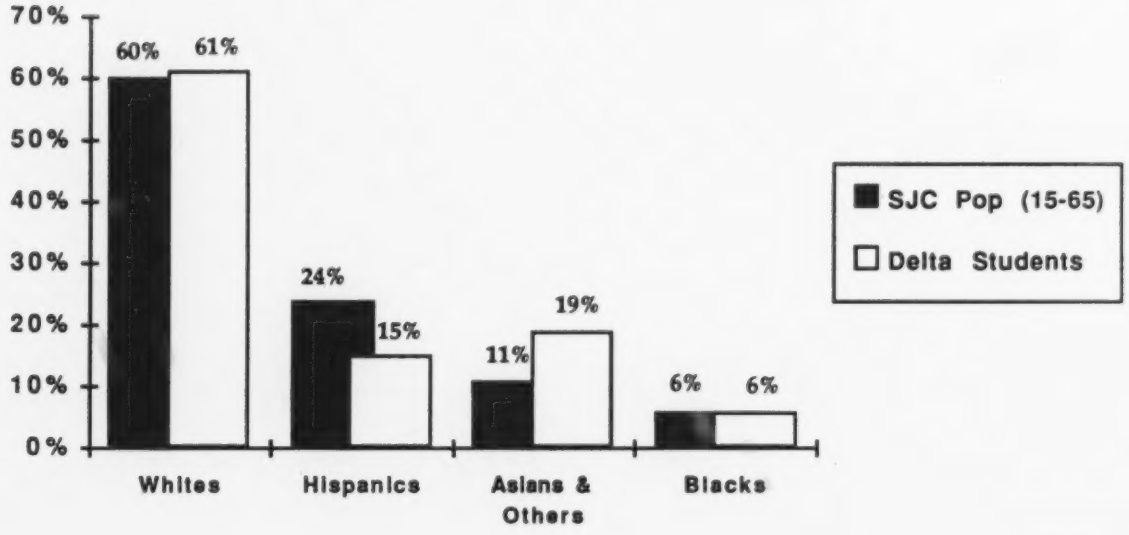


CHART J

Percent of Incoming Delta College Students Scoring at Reading Levels I, II, and III on the CGP, by Ethnic Group, Fall 88, N=2,005

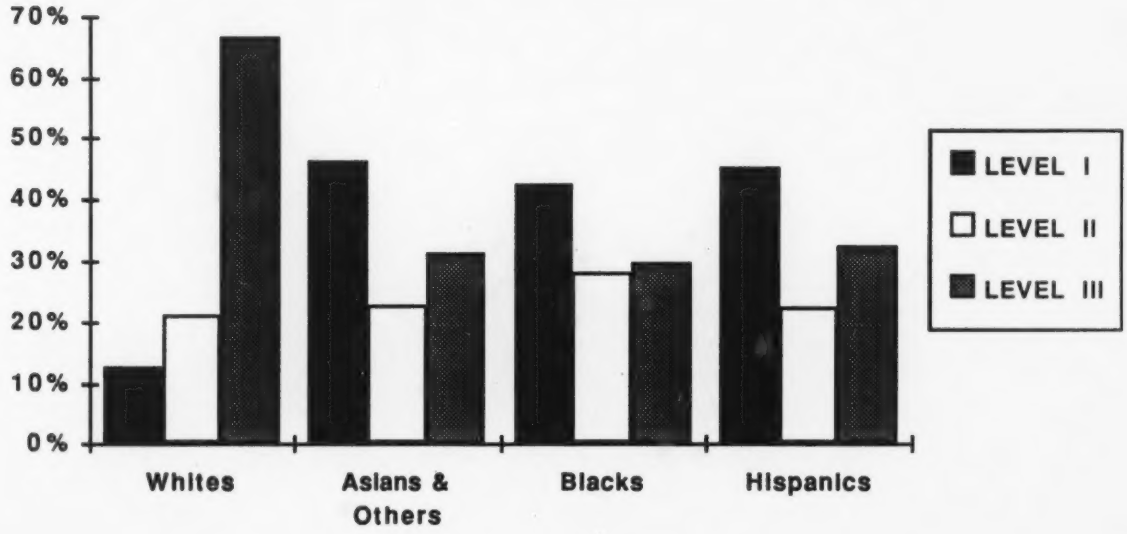


CHART K

Percent of Incoming Delta College Students Scoring at Levels I, II, and III on the CGP Math Test, by Ethnic Group, Fall 88, N=2,373

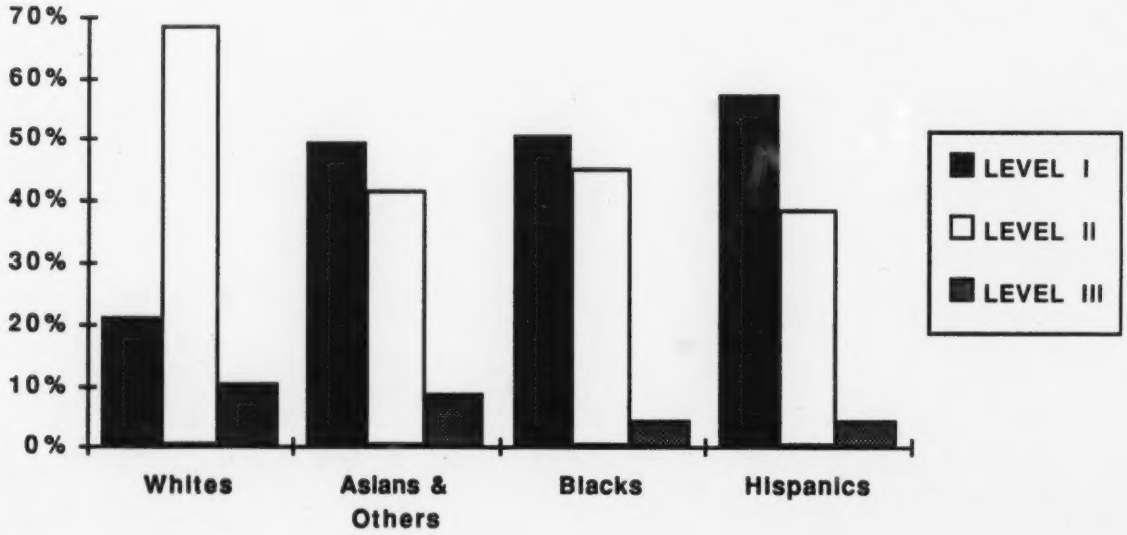


CHART L

Over- and Under-Representation in the Completion of Degrees and Certificates, by Ethnic Group, 1988-89, N=1,155

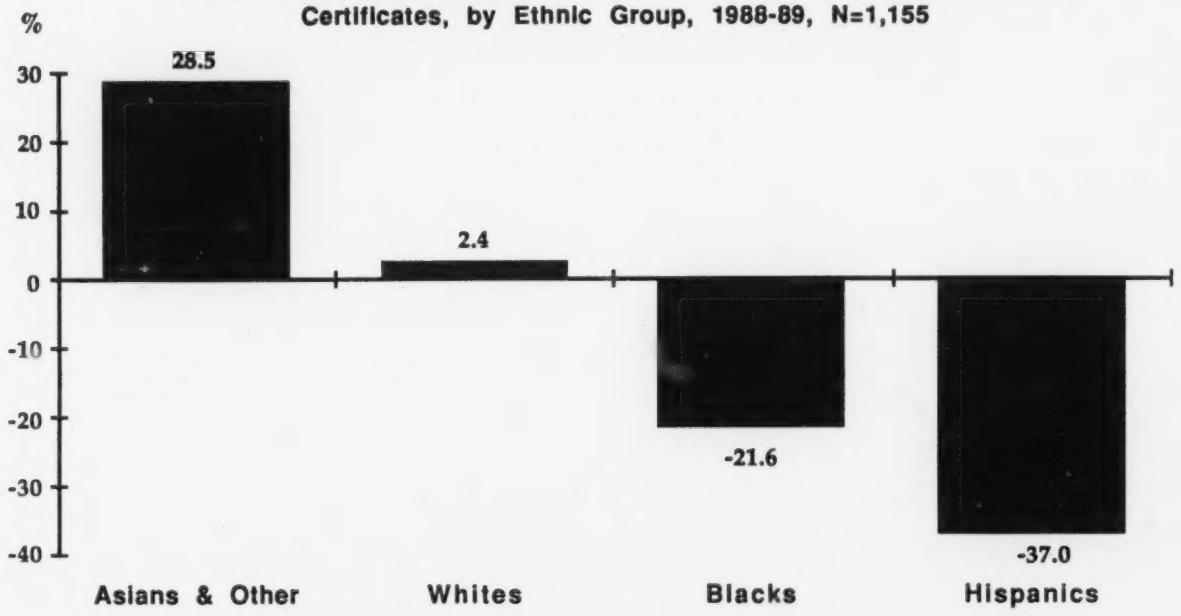
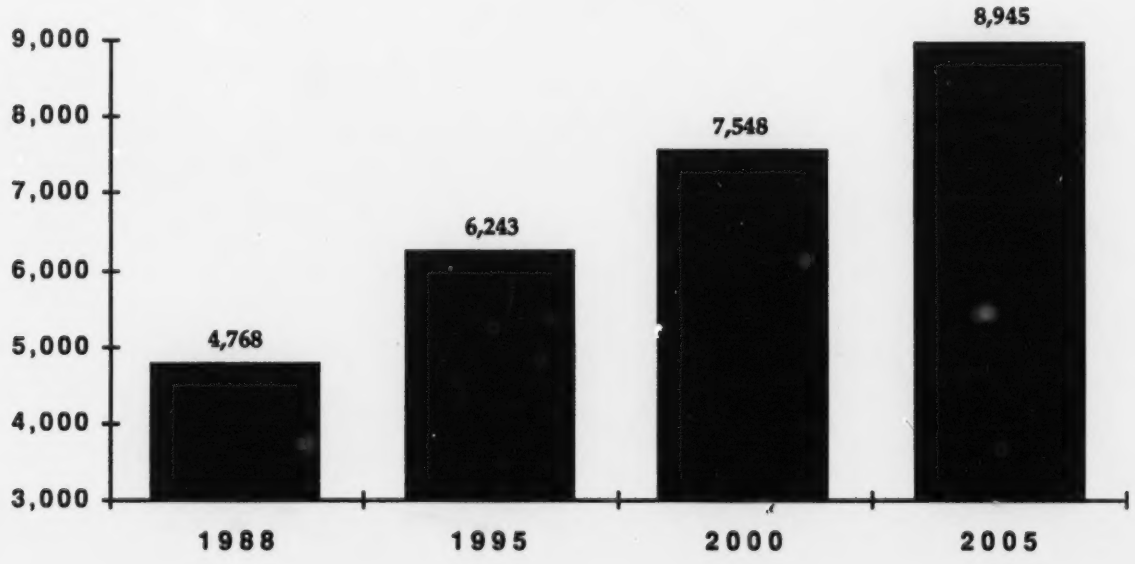


CHART M

Projected Number of Black and Hispanic Students at Delta College, 1988-2005



II PRINCIPLES FOR MAKING RESEARCH MORE USEFUL

What can we glean from these four studies? What lessons can be learned from how they were conceived, conducted, and presented that can improve the use of institutional research in community colleges?

I believe the collective experience of these studies does suggest several principles for making research more useful to CEO's and Trustees. As I said at the outset, making research more useful is a two-way street. Accordingly, I set out below principles separately for researchers and decision makers.

A. Principles for Researchers

1. ***Research must be relevant to major policy and management issues.*** The first criterion of successful institutional research is that it must be directly applicable to the important decisions CEO's and Trustees are facing.

   This principle requires distinguishing between institutional research and research on teaching and learning. The latter is primarily concerned with ascertaining the effect of personal and classroom variables on learning outcomes. This is extremely important, and more of it needs to be done, in community colleges and elsewhere.

   But the focus of institutional research is different. Its purpose is to help top level managers make decisions, and rationalize policies and resource allocations.

   If institutional research is not directly relevant to the important decisions and policy issues faced by CEO's and Trustees, they will see it as a marginally interesting adjunct, not as crucial management tool.

   This means that researchers must be keenly sensitive to the pressing policy and management issues, and that these issues must form the backbone of the research agenda.

   It also means that researchers must subordinate their natural professional tendencies to pursue disciplinary, theoretical, and methodological questions. The institutional researchers' task is not to demonstrate their statistical virtuosity, but to give policy makers something better than subjective judgment on which to make important decisions. Technical issues are, of course, highly legitimate topics, but they belong in a different research arena.

2. ***Time is of the essence. Decisions are going to be made either in the presence or absence of information.*** This is a difficult principle for researchers to accommodate to, given the emphasis in their professional training on thoroughness and detail.

Nevertheless, institutional researchers who aspire to have their work be used in the often hectic conditions that surround the making of important policy decisions must realize that the task is not to conduct the methodologiacly perfect study, but to get information and analysis to the decision making point in time to improve that decision.

If research develops the reputation of being unable to respond to managements's pressing needs, then decision makers will not turn to it for assistance.

3. ***Clarity of presentation is the sine qua non of success.*** It is remarkable how those of us in the business of education regularly violate the most basic rules of communication. For harried executives, we produce lengthy reports written in technical jargon in which the central findings are buried in complex tables and esoteric statistical formulae.

   The researcher's analysis must be methodologically strong and technically sophisticated, but when it comes to time to present findings to administrators, technique and methodology must remain in the background. Researchers must be able to extract policy relevant findings from a complex body of data, and present them briefly, forcefully, and clearly.

   The value of graphics cannot be overstated. If a picture is worth a thousand words, a chart is worth at least a dozen tables. In the last few years, high quality and easily used software graphics have become readily available for all personal computers. Researchers who fail to make them the bread and butter of their reports and presentations are passing up a prime opportunity to increase the utilization of research and, in the process, are falling dangerously out of date in the practice of their craft.

B. Principles for CEO's and Trustees

Improving decisions through research does not rest entirely on the shoulders of researchers. CEO's and Trustees have key roles to play, and the principles below suggest how they can make the research-decision equation more successful.

1. ***A commitment to the value of research is the bedrock on which all else rests.*** No actions that researchers take, no hardware that computer departments acquire, and no data bases that are assembled will have much effect if there is no real commitment at the CEO and Trustee level to seek and use research to improve decisions.

   This commitment must be more than rhetorical lip service. It must reflect the belief that responsible decisions require objective data and sophisticated analysis, and an insistence that they be provided.

CEO's and Trustees need further to understand that research is not a means of adding credibility to an already made decision. It is a guide to making better decisions, and it often leads to unexpected and sometimes uncomfortable conclusions.

2. ***Research must be adequately supported.*** A commitment to the value of research must be concretely expressed in a reasonable level of support. At a minimum, this translates into a full-time professionally trained researcher with state of the art computing facilities, and a modest budget for software, data acquisition, travel, and reproduction.

   In research, much can be done with little. Compared to most of the college's other executive or management functions, research requires substantially fewer resources--in personnel, space, funds, and equipment. But the irreducible minimum specified above is essential.

3. ***Research must have status and access in the college's organization.*** If research is to frame studies and acquire the data that will enlighten issues and improve decisions, it must be part of the college's top management group.

   Assigning the research function as a subordinate responsibility to one of the college's administrators stamps its real importance as low on the institution's scale of values, and indicates that the administration sees research not as a key part of the college's mechanism for assessing problems and making decisions, but as a lower order technical service.

By way of summary, there can be little question that research has an invaluable contribution to make toward improving the key policy and management decisions CEO's and Trustees must continually make in their roles as the administrators of community colleges.

Similarly, it is also clear that CEO's and Trustees can vastly improve the quality of their management by demanding and using research

The key is for researchers to make their work relevant, timely, and clear. For their part, CEO's and Trustees must express the commitment and create the conditions for research to flourish.

ERIC Clearinghouse for
Junior Colleges
AUG 21 1992